

APPLICANT: KAGI
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INTERNATIONAL
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IN THE CLAIMS:

Please delete Claims 1 - 14 as found in the PCT Publication WO/01/83864 (English translation included herein).

Please enter the following claims:

¹⁵
~~1~~. A method for producing a ring traveler (10) for ring spinning or ring twisting machines, which has a core (20) consisting of iron material, and comprising the step of subjecting at least a portion of the core (20) to a nitriding treatment during which heat energy and a nitriding agent as active medium are supplied to the core (20).

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~~2~~. The method as claimed in claim ¹⁵~~1~~, wherein the core (20) is heated to a temperature in the range of 450°C - 600°C.

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~~3~~. The method as claimed in claim ¹⁶~~2~~, wherein the core (20) is maintained in said temperature range for 3 - 60 hours.

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The method as claimed in claim 1, 2 or 3, wherein the nitriding agent is supplied in the form of a gas comprising NH_3 and N_2 components, a nitrogen-enriched liquid or a nitrogen-enriched plasma.

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The method as claimed in claim 1, wherein the active medium includes components selected from the group consisting of sulfur components and carbon components.

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The method as claimed in claim 1, wherein method includes the step of polishing the core (20) before the nitriding treatment.

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The method as claimed in claim 1, wherein method includes the step of polishing the core (20) after the nitriding treatment.

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The method as claimed in claim 1, wherein method includes the step of oxidizing the core (20) before the nitriding treatment.

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²³_{9.} ¹⁵ The method as claimed in claim ~~1~~, wherein method includes the step of oxidizing the core (20) after the nitriding treatment.

²⁴_{10.} A ring traveler (10) for ring spinning or ring twisting machines, comprising an iron core (20) wherein at least one mechanically stressed part of the core (20) has a nitrided edge layer (23, 24).

²⁵_{11.} ²⁴ A ring traveler (10) according to claim ~~10~~, wherein the mechanically stressed part of the core (20) comprises a running surface for the thread.

²⁶_{12.} ²⁴ A ring traveler (10) according to claim ~~10~~, wherein the mechanically stressed part of the core (20) comprises a surface running on the ring of the spinning or twisting machine.

²⁷_{13.} ²⁴ A ring traveler (10) as claimed in claim ~~10~~, wherein the edge layer (23, 24) includes a connecting layer (23).

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~~14.~~ A ring traveler (10) as claimed in claim ²⁴~~10~~, wherein the edge layer (23, 24) includes a connecting layer (23) and a diffusion layer (24).

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~~15.~~ A ring traveler (10) as claimed in claim ²⁴~~10~~, wherein the edge layer (23, 24) includes a diffusion layer (24).

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~~16.~~ The ring traveler (10) as claimed in claim ²⁷~~13~~, wherein the connecting layer (23) has a thickness of 0.1µm - 30 µm.

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~~17.~~ The ring traveler (10) as claimed in claim ²⁸~~14~~, wherein the diffusion layer (24) has a thickness of 1µm - 2000µm.

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~~18.~~ The ring traveler (10) as claimed in claim ²⁸~~14~~, wherein the connecting layer (23) has a thickness of 8µm - 12µm and the diffusion layer (24) has a thickness of 100µm - 200µm.

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The ring traveler (10) as claimed in claim ~~13~~ wherein the connecting layer (23) contains components selected from the group consisting of sulfur and carbon.

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The ring traveler (10) as claimed in claim ~~10~~, wherein the surface (22) of the core (20) is polished and/or is provided with an oxide layer.

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The ring traveler (10) as claimed in claim ~~20~~ wherein the surface (22) of the core (20) is black, blue, yellow or white.

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The ring traveler (10) as claimed in claim ~~10~~, wherein the basic material (21) of the core (20) is nitriding steel.

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The ring traveler (10) as claimed in claim ~~13~~, wherein the basic material (21) of the core (20) contains a nitride-forming element selected from the group consisting of chromium, vanadium, aluminum, molybdenum, manganese and nickel.
